



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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Deviation

C45-K

Job Sheet 199469



Part No: C45-K

Job Qty: 1 pcs

Part Name: C-Series Remote Hook 4,500 lbs Lift Capacity - Keeperless



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 8/23/19

Job Tracking No:

Created By: Jennifer Renwick

Due Date: 10/2/19

Type: Stock

Description: SIOP

Note: C45-K REV.2 IPP REV:A 18.02.07 NEW ISSUE DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
95	External Load - 1	1 pcs	10/2/19		0.00	0.50	External Load - 1		
							External Load - 2		<i>Michael</i>
							External Load - 3		
100	External Load - 2 - B4B	1 pcs	10/2/19		0.00	0.50	External Load - 1 - B4B		<i>AP 2019/09/12</i>
							External Load - 2 - B4B		<i>Michael</i>
							External Load - 3 - B4B		
120	QC 5	1 pcs	10/2/19		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		<i>DAS</i>
							QC 5 - 30		<i>30 SEP 12 2019</i>
							QC 5 - 40		<i>9-89</i>
							QC 5 - 61		
							QC 5 - 81		
140	Packaging 3-1 - Stock - B4B	1 pcs	10/2/19		0.00	0.00	Packaging 3 - 1 - B4B		
							Packaging 3 - 2 - B4B		



Container No: S211913



Part: C45-K

Job No: 199469

Serial No/Batch: S211913

Revision: 2

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
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CANADA
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Date: 09/06/19

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				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	DAS 30 SEP 12 019
				Packaging 3 - 9 - B4B	9-89
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
160 QC 21 - SA	1 pcs	10/2/19	0.00 0.00	QC 21 - SA - 21	DAS 21 SEP 12 2019
				QC 21 - SA - 70	
				QC 21 - SA - 53	9-89

Part Op 100 - 1- PICK C45-2-1 AND LASER ENGRAVE AS PER DWG , SEE NOTE 3 AND 4 ON SHEET 3. 2- ASSEMBLE AS
 Descriptions: PER DWG 3- PERFORM ALL NECESSARY TEST USING FAI TEST SHEET.

120 - (QC5- Inspect part completeness to step on W/O)

140 - (Identify as per dwg & Stock Location: _____) GA 164

160 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
188-FPSS-1/4-20-3/8	Set Screw	2 Ea (2 ea)	95-External Load - 1	5200928
188-FSCS-1032-5/8	Flat socket cap Screw	4 Ea (4 ea)	100-External Load - 2 - B4B	5199362
2595K2 7856K75	Heat Shrink	1 ft (1 ea)	100-External Load - 2 - B4B	5190246
32448	16-14 AWG Knife Connector	2 Ea (2 ea)	100-External Load - 2 - B4B	5151100
600.1309-A	Label	1 pcs (1 ea)	100-External Load - 2 - B4B	5136710
600.1312	Caution Sticker	1 pcs (1 ea)	100-External Load - 2 - B4B	5204230

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AN4-23A	Bolt	2 Ea (2 ea)	100-External Load - 2 - B4B	F123434-1
AN5-21A	Bolt	4 Ea (4 ea)	100-External Load - 2 - B4B	5097081-1
C10-41	Strain Relief Connector	1 Ea (1 ea)	100-External Load - 2 - B4B	5083917
C2-14-2	Label Rivets	2 Ea (2 ea)	100-External Load - 2 - B4B	5040661
C45-1-1	Manual Knob Release	1 pcs (1 ea)	100-External Load - 2 - B4B	5197844
C45-10-1	Lock Spring Pin	1 Ea (1 ea)	100-External Load - 2 - B4B	5029203
C45-10-2	Lock Spring	1 pcs (1 ea)	100-External Load - 2 - B4B	5177837
C45-11-1	Sideplate, Solenoid Side	1 pcs (1 ea)	100-External Load - 2 - B4B	5177609
C45-11-2	Locating Pin	2 Ea (2 ea)	100-External Load - 2 - B4B	5097709
C45-12-1	Lock Bushing	2 pcs (2 ea)	100-External Load - 2 - B4B	5179711
C45-12-2	Lock Shaft	1 pcs (1 ea)	100-External Load - 2 - B4B	5163665
C45-12-3	Lock	1 pcs (1 ea)	100-External Load - 2 - B4B	5182363
C45-12-4	Lock Roller	1 pcs (1 ea)	100-External Load - 2 - B4B	5178364
C45-12-5	Lock Roller Pin	1 pcs (1 ea)	100-External Load - 2 - B4B	5093171
C45-12-6	Retaining Ring	2 Ea (2 ea)	100-External Load - 2 - B4B	5029303
C45-13-1	Keeper Bushing	2 pcs (2 ea)	100-External Load - 2 - B4B	5182323
C45-13-3	Keeper Shaft	1 pcs (1 ea)	100-External Load - 2 - B4B	5170189
C45-15	Keeperless Adapter	1 pcs (1 ea)	100-External Load - 2 - B4B	5197624
C45-2-1	Sideplate - MRK	1 pcs (1 ea)	100-External Load - 2 - B4B	5177777
C45-3-1	Radial Bearing	2 Ea (2 ea)	100-External Load - 2 - B4B	5097909
C45-3-10	Latch Shaft	1 pcs (1 ea)	100-External Load - 2 - B4B	5183706
C45-3-11	Actuator	1 pcs (1 ea)	100-External Load - 2 - B4B	5165546
C45-3-12	Latch Roller Bearing	1 Ea (1 ea)	100-External Load - 2 - B4B	5097903
C45-3-2	Latch Roller Pin	1 pcs (1 ea)	100-External Load - 2 - B4B	5029316
C45-3-2-1	Snap Ring	2 Ea (2 ea)	100-External Load - 2 - B4B	5097898
C45-3-3	Latch Roller	1 pcs (1 ea)	100-External Load - 2 - B4B	5127763
C45-3-4	Pin	2 pcs (2 ea)	100-External Load - 2 - B4B	5133668
C45-3-4-1	Retaining Ring	4 Ea (4 ea)	100-External Load - 2 - B4B	5210604
C45-3-5	Teflon Spacer	2 Ea (2 ea)	100-External Load - 2 - B4B	5097745
C45-3-6	Latch	1 pcs (1 ea)	100-External Load - 2 - B4B	5165714
C45-3-7	Link	1 pcs (1 ea)	100-External Load - 2 - B4B	5029322
C45-3-8A	Actuator Shaft Bushing	1 pcs (1 ea)	100-External Load - 2 - B4B	5210724

C45-3-8B	Actuator Shaft Bushing	1 pcs (1 ea) 100-External Load - 2 - B4B	5182358
C45-3-9	Lever Spring	1 pcs (1 ea) 100-External Load - 2 - B4B	5190299
C45-4-1	Trunnion Bushing	2 pcs (2 ea) 100-External Load - 2 - B4B	5192908
C45-4-4KA	Load Beam Keeperless Assembly	1 pcs (1 ea) 100-External Load - 2 - B4B	5166226
C45-4-5	Loadbeam Spacer	1 pcs (1 ea) 100-External Load - 2 - B4B	5097731
C45-5-1	Lever Stop Pin	1 Ea (1 ea) 100-External Load - 2 - B4B	5089113
C45-5-2	Lever Stop	1 pcs (1 ea) 100-External Load - 2 - B4B	5175808
C45-7-1	LOADBEAM BUMPER	1 pcs (1 ea) 100-External Load - 2 - B4B	5156421
C45-7-2	Lock Bumper	2 pcs (2 ea) 100-External Load - 2 - B4B	5200483
C45-8-1-2	Solenoid Nut	2 pcs (2 ea) 100-External Load - 2 - B4B	5175565
C45-8-2	Solenoid	1 pcs (1 ea) 100-External Load - 2 - B4B	52001006
C45-8-4	Solenoid Cover Gasket	1 pcs (1 ea) 100-External Load - 2 - B4B	5199513
C45-8-5	Solenoid Cover	1 pcs (1 ea) 100-External Load - 2 - B4B	5175959
C45-9-1	Clock Spring Cover	1 pcs (1 ea) 100-External Load - 2 - B4B	5167968
C45-9-2	Clock Spring	1 pcs (1 ea) 100-External Load - 2 - B4B	5107946
EL-PLUG-M	3-Prong Male Spade Plug	1 Ea (1 ea) 100-External Load - 2 - B4B	5192574
EL314-SJTOW	Long Line Electrical Wire, 14/3 Gauge replace w/t 01004-08-047	1 ft (1 ea) 100-External Load - 2 - B4B	5179682
MS21044N5	Nut	8 1 Ea (4 ea) 100-External Load - 2 - B4B	5192486
MS27039-4-08	Screw	1 Ea (1 ea) 100-External Load - 2 - B4B	5039330-1
NAS1149F0463P	Washer (AN960-416)	3 Ea (3 ea) 100-External Load - 2 - B4B	5097088-1
NAS1149F0563P	Washer (AN960-516)	8 Ea (8 ea) 100-External Load - 2 - B4B	5200164

Loctite 242 (5186572)
 Loctite 620 (5194792)
 Self-T-ee (M128063)
 AeroShell grease No.7 (5138964)

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
95-External Load - 1	188-FPSS-1/4-20-3/8	2	129	0
100-External Load - 2 - B4B	188-FSCS-1032-5/8	4	118	0
	2595K2	1	16	0
	32448	2	55	0
	600.1309-A	1	69	0
	600.1312	1	24	0
	AN4-23A	2	635	0
	AN5-21A	4	254	0
	C10-41	1	4	0
	C2-14-2	2	112	0
	C45-1-1	1	13	0
	C45-10-1	1	149	0
	C45-10-2	1	18	0
	C45-11-1	1	15	0
	C45-11-2	2	28	0
	C45-12-1	2	26	0
	C45-12-2	1	5	0
	C45-12-3	1	18	0
	C45-12-4	1	53	0
	C45-12-5	1	26	0
	C45-12-6	2	96	0
	C45-13-1	2	32	0
	C45-13-3	1	16	0
	C45-15	1	12	0
	C45-2-1	1	14	0
	C45-3-1	2	95	0
	C45-3-10	1	19	0
	C45-3-11	1	16	0
	C45-3-12	1	59	0
	C45-3-2	1	39	0
	C45-3-2-1	2	59	0
	C45-3-3	1	7	0
	C45-3-4	2	18	0
	C45-3-4-1	4	51	0
	C45-3-5	2	69	0
	C45-3-6	1	8	0
	C45-3-7	1	0	0
	C45-3-8A	1	0	0
	C45-3-8B	1	20	0
	C45-3-9	1	108	0
	C45-4-1	2	25	0
	C45-4-4KA	1	4	0
	C45-4-5	1	3	0
	C45-5-1	1	23	0
	C45-5-2	1	25	0
	C45-7-1	1	31	0
	C45-7-2	2	34	0
	C45-8-1-2	2	48	0
	C45-8-2	1	17	0
	C45-8-4	1	35	0
	C45-8-5	1	25	0
	C45-9-1	1	8	0
	C45-9-2	1	29	0
	EL-PLUG-M	1	28	0
	EL314-SJTOW	1	0	0
	MS21044N5	4	177	0
	MS27039-4-08	1	195	0
	NAS1149F0463P	3	518	0
	NAS1149F0563P	8	265	0

Part Specifications

Specifications could not be found.

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P/N	Revision	Drawing Specified Wire	Acceptable Alternate Wire
C2	2	MIL-C-27500 11-14416	N/A
C3	2	MIL-C-27500 11-14417	N/A
C10	3	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
C15	2	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
C20	C	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
C45	C	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
C60	C	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
C250	C	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SWA3-2	3	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SWA3-3	3	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SWA3-4	3	EL 414-ARTIC 4/14	Texcan 01121-744A5
SWA6A-2	E	Texcan 01121-724AM	N/A
SWA6A-3	E	Texcan 01121-734A5 or 01004-08-047	N/A
SWA6A-4	E	Texcan 01121-744A5	N/A
SWA6A-6	E	Texcan 04121-764A5	N/A
SWA6A-8	E	Texcan 12701-08-014 or McMaster 7081K38	N/A
SWA10A-2	3	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SWA10A-3	3	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SWA10A-4	3	EL 414 ARTIC 4/14	Texcan 01121-744A5
SWA10A-6	3	EL 616 ARTIC	Texcan 04121-764A5
SWA10A-8	3	Polar Wire 30806	Texcan 12701-08-014 or McMaster 7081K38
SWA15A-2	1	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SWA15A-3	1	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SWA15A-4	1	EL 414 ARTIC 4/14	Texcan 01121-744A5
SWA15A-6	1	EL 616 ARTIC	Texcan 04121-764A5
SWA15A-8	1	EL 816 ARTIC	Texcan 12701-08-014 or McMaster 7081K38
SAW25A-2	1	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SAW25A-3	1	3/14 SJTOW	Texcan 01121-734A5 or 01004-08-047
SAW25A-4	1	EL 414 ARTIC 4/14	Texcan 01121-744A5
SAW25A-6	1	EL 616 ARTIC	Texcan 04121-764A5
SAW25A-8	1	EL 816 ARTIC	Texcan 12701-08-014 or McMaster 7081K38



Remote Cargo Hook Test Form

C45

Work Order 199469

Customer _____

Serial Number 5211913

Date 2019-9-10

# of Releases	Load (Lbs.)	Release Method	Remarks	Result	Pass/fail
1	11,250	Static Hold	Hold for two Minutes and reduce load to zero	N/A	Pass
10	2,250	Electircal, 25 volts	No "hang ups" permitted	N/A	Pass
2	4,500	Electircal, 22 volts	Current shall not exceed 12.4A	8.7 A	Pass
2	3,500	Electircal, 22 volts	Current shall not exceed 12.4A	8.6 A	Pass
2	2,500	Electircal, 22 volts	Current shall not exceed 12.4A	8.3 A	Pass
2	1,500	Electircal, 22 volts	Current shall not exceed 12.4A	8.4 A	Pass
2	500	Electircal, 22 volts	Current shall not exceed 12.4A	7.9 A	Pass
1	4,500	Electircal, 20 volts	Current shall not exceed 11.3A	7.1 A	Pass
1	4,500	Electircal, 28 volts	Current shall not exceed 15.8A	7.1 A	Pass
1	4,500	Manual		N/A	Pass
1	4,500	Impact Test	Impact shackle 10 times, shall not release	N/A	Pass
1	N/A	Solenoid Ohms	Shall not exceed 1.7-2.0 Ohms	2.0 Ohms	Pass
1	N/A	Electircal Continuity	Across both wires	N/A	Pass

Test Conducted By: Michel Lalonde
Technician

Signature: Sylvia Barber
QC 5 Small FAB / QA



Entered: 65 Date: Oct 1/19



NCR No. 19-740

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only

Job: <u>199469</u>		DISPOSITION		DEPARTMENT/PROCESS			
Part No. <u>C series hooks and SWA Swivels</u>		Rework ☐ Scrap ☐ Use-as-is ☐		Skid-tube ☐ Machining ☐ Large Fab ☐	Cross tube ☐ Small Fab ☐ Finishing ☐	Eng. (Non-AW) ☒ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐	Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐
Date : <u>2019/09/12</u>		Sequence #:		QTY Affected : <u>1</u>		MRB (QSI042) May, 9 2019	
Description Work Order Deviation				Disposition			
The electrical wires listed under "Acceptable Alternate Wire" on the attached sheet are acceptable to use in place of the "Drawing Specified Wire"				This deviation is acceptable.			
				No change to fit form or function.			
				The job route must specify the wire that is called out on the drawing			
				The inventory P/N must reflect the same P/N that was received from a vendor			
Root Cause				FAULT CATEGORY			
Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☒ Process Improvement ☐ Human Factors ☐				☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☒ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
				Other/Details:			